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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/576,801	04/21/2006	Masato Nomiya	M1071.1967	5833

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DICKSTEIN SHAPIRO LLP  
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EXAMINER
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NGUYEN, KHANH TUAN

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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02/04/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/576,801

Applicant(s)

NOMIYA ET AL.

Examiner

Khanh T. Nguyen

Art Unit

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9-12 and 14-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 1-7, 9-12, and 14-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Final***

***Response to Amendment***

1. The amendment filed on 12/26/2007 is entered and acknowledged by the Examiner. Claims 1-7, 9-12, and 14-22 are currently pending in the instant application. Claims 8 and 13 have been canceled.

***Maintained Rejection***

2. Claims 1-7, 9-12, and 14-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Kashima et al. (U.S. Pat. 5,932,326). Claims 1, 2, 4-9, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Saito et al. (U.S. Pat. 6,762,369). Claims 3, 10-14, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito (U.S. Pat. 6,762,369).

The rejections are maintained for the reasons set forth in the office action mailed on 10/09/2007.

***Withdrawn Objection/Rejection***

3. The objection of the abstract due to typographical errors is withdrawn in view of Applicant's amendment. The objection of claim 4 due to typographical errors is withdrawn in view of Applicant's amendment. The rejections of claims 1, 2, 5-10, 15, and 16 under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al. (U.S. Pat.

4,400,214) in view of Hayama et al. (U.S Pat. 6,8467,375) is withdrawn in view of Applicant's amendment and/or remarks. The rejections of claims 3, 10-14, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al. (U.S Pat. 4,400,214) in view of Hayama (U.S Pat. 6,8467,375) is withdrawn in view of Applicant's amendment and/or remarks.

### ***Claim Objections***

4. Claims 21 and 22 are objected to because of the following informalities: Claims 21 and 22 currently recites a "previously presented" statue, however claims 21 and 22 were NOT previously presented. Appropriate correction is required.

5. Claims 21 and 22 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 21 failed to further limit the subject matter of previous claim 5.

Claim 22 failed to further limit the subject matter of previous claim 6.

### ***Response to Arguments***

6. The newly added claims 21 and 22 failed to further limit the subject matter of previous claims 5 and 6. Claims 21 and 22 are rejected under 35 U.S.C. 102(b) as

being anticipated by Kashima et al. (U.S. Pat. 5,932,326) and under 35 U.S.C. 102(e) as being anticipated by Saito et al. (U.S. Pat. 6,762,369).

7. Applicant's arguments filed on 12/26/2007 have been fully considered but they are not persuasive.

In responses to Applicant's argument, on pages 8-10, Applicant argues that Kashima et al. (U.S. Pat. 5,932,326) and Saito et al. (U.S. Pat. 6,762,369) failed to suggest or teach the claimed inorganic compound (an oxide of at least one of Al, Si, Zr, Ni, Ti, Nb, Mn, and Mg) is disposed on particle surfaces of the metal powder. The Examiner respectfully disagrees with the Applicant's argument.

8. Applicant should refer to Kashima et al. reference, at column 3 lines 38-40, wherein Kashima et al. teaches the addition of glass composition (inorganic compound) is added to promote sintering of the electrical-conductive imparting metal or to adjust the sintering temperature. Kashima et al. further teaches, at column 4 lines 44-57, an aluminoborosilicate glass containing Si and Al oxides (**SiO<sub>2</sub>** and **Al<sub>2</sub>O<sub>3</sub>**) fusing with an electrical-conducting imparting material (metal powder) to form a powder having an average particle size of 1.0  $\mu\text{m}$ . The disclosure of oxide such as SiO<sub>2</sub> and Al<sub>2</sub>O<sub>3</sub> (inorganic glass compound) sintering or fusing with electrical-conductive metal particle is readable on an oxide disposed on particle surfaces of the metal powder.

9. Similarly, Saito et al. teaches adding glass powder selected from at least two or more oxides selected from **SiO<sub>2</sub>**, **B<sub>2</sub>O<sub>3</sub>**, **Al<sub>2</sub>O<sub>3</sub>**, **CaCO<sub>3</sub>**, **SrCO<sub>3</sub>**, **BaCO<sub>3</sub>**, **La<sub>2</sub>O<sub>3</sub>**, **ZrO<sub>2</sub>**, **TiO<sub>2</sub>**, **MgO**, **PbO**, **ZnO**, **Li<sub>2</sub>CO<sub>3</sub>**, **Na<sub>2</sub>CO<sub>3</sub>**, and **K<sub>2</sub>CO<sub>3</sub>** into a metal powder containing conductor composition to form an electrode (Col. 4, lines 1-8). The incorporation of

oxide glass powder into the metal powder composition will inherently disposed the oxide on the surface of the metal powder. Saito et al. further teaches, at Fig. 3, oxide particles 8 are arranged on the surface of a metal containing electrode 4 to reduce solder leakage (Col. 6, lines 6-15).

Based on the rationale above, the references specifically or inherently meet each of the claimed limitations in their broadest interpretations. Therefore, the rejection is maintained.

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh T. Nguyen whose telephone number is (571)

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272-8082. The examiner can normally be reached on Monday-Friday 8:00-5:00 EST PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571) 272-1302. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



KTN  
01/27/2008



Mark Kopec  
Primary Examiner